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## PATENT APPLICATION

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Attorney Docket No.: 2950.27US01

Buckley et al.

Confirmation No.: 5623

Application No.: 09/435,748

Examiner: Ruthkosky, M.

Filed: November 8, 1999

Group Art Unit: 1745

For: BATTERIES WITH THIN ELECTRODES

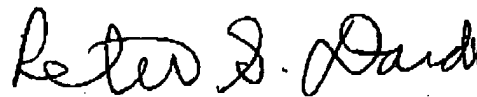
LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant notes that they have not received a signed Form PTO-1449 that was filed on June 7, 2000. A copy of this form is attached. Applicant respectfully requests the return of a signed version of the (7) pages of the Form PTO-1449 dated June 7, 2000.

Respectfully submitted,



Peter S. Dardi, Ph.D.  
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*Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 50-3863.*

Application No. 09/435,748

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office, Fax No. 571-273-8300 on the date shown below.

May 28, 2008  
Date

  
Peter S. Dardi, Ph.D.

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FORM PTO-1449	Atty. Docket No.: NL9.12-0028	Serial No.: 09/435,748
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT  <div style="font-size: 2em; font-weight: bold; text-align: center;">COPY</div>	Applicant:	
	Buckley et al.	
	Filing Date	Group Art:
	November 8, 1999	2811

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA	3,918,988	11-11-75	Sandors G. Abens	136	6	
AB	4,576,883	03-18-86	Hope et al.	429	192	
AC	4,649,037	03-10-87	Marsh et al.	423	330	
AD	4,675,260	06-23-87	Sakurai et al.	429	191	
AE	4,828,834	05-09-89	Nagaure et al.	429	194	
AF	4,830,939	05-16-89	Lee et al.	429	192	
AG	4,959,282	09-25-90	Dahn et al.	429	224	
AH	4,980,251	12-25-90	Thackeray et al.	429	224	
AI	5,037,712	08-06-91	Shackle et al.	429	121	
AJ	5,153,081	10-06-92	Thackeray et al.	429	194	
AK	5,211,933	05-18-93	Barboux et al.	423	596	

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AL	WO 96/12676	5-02-97	PCT			
AM	WO 97/20773	6-12-97	PCT			
AN	WO 97/37935	10-16-97	PCT			

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AO	"A Thermodynamic, Structural And Kinetic Study Of The Electrochemical Lithium Intercalation into the Xerogel $V_2O_5 \cdot 1.5 H_2O$ In a Propylene Carbonate Solution" by, Baddour et al., J. Electroanal. Chem. 314 (1991) pp. 81-101.
AP	"Aerogels and Xerogels of $V_2O_5$ As Intercalation Hosts" by, Le et al., J. Electrochem. Soc., 1996, pp. 0809-0810.
AQ	All-Solid-State Lithium Thin-Film Rechargeable Battery with Lithium Manganese Oxide" by Park et al., Electrochem. and Solid-State Letters, 2(2) (1999) pp. 58-59.

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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
BA	5,281,496	01-25-94	Robert L. Clark	429	218	
BB	5,312,611	05-17-94	Takami et al.	423	447	
BC	5,348,726	09-20-94	Wang et al.	423	605	
BD	5,356,842	10-18-94	Yamakawa et al.	501	87	
BE	5,496,664	03-05-96	Gerhard Sterr	429	224	
BF	5,514,496	05-07-96	Mishima et al.	429	218	
BG	5,523,073	06-04-96	Sumida et al.	423	605	
BH	5,561,006	10-01-96	Lecerf et al.	429	218	
BI	5,587,256	12-24-96	Wilson et al.	429	218	
BJ	5,589,300	12-21-96	Fauteux et al.	429	218	
BK	5,604,057	02-18-97	Gholam-Abbas Nazri	429	224	

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
BL	O 820 113 A1	01-21-98	EPO			
BM	O 837 036 A1	04-22-98	EPO			English Abstract

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BN	"Amorphous V <sub>2</sub> O <sub>5</sub> (-P <sub>2</sub> O <sub>5</sub> ) And WO <sub>3</sub> As Insertion Anodes For Lithium-Ion Batteries" by, Shodai et al., The Electrochem. Soc. Proc., Vol. 94-28, pp. 224-233.
BO	"An Investigation Into The Discharge Capacity Loss For Composite Insertion Electrodes Based On Li <sub>1</sub> V <sub>2</sub> O <sub>5</sub> ," by, Barker et al., Electrochem. Acta, Vol. 40, No. 8, pp. (1995) 949-952.

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Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
CA	5,674,642	10-07-97	Le et al.	429	218	
CB	5,674,644	10-07-94	Gholem-Abbas Nazri	429	224	
CC	5,677,087	10-14-97	Amine et al.	429	224	
CD	5,695,887	12-09-97	Amatucci et al.	429	48	
CE	5,702,679	12-30-97	Sheargold et al.	423	599	
CF	5,705,291	01-06-98	Amatucci et al.	429	137	
CG	5,738,957	04-14-98	Amine et al.	429	223	
CH	5,759,717	06-02-98	Amins et al.	429	218	
CI	5,759,720	06-02-98	Glezen G. Amatucci	429	224	
CJ	5,789,332	07-21-98	Amine et al.	429	218	
CK	5,807,646	09-15-98	Iwata et al.	429	224	
CL	5,952,125	09-14-99	Bi et al.	429	231.2	
CM	5,965,293	10-12-99	Idota et al.	429	218.1	

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
CN						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

CO	"Cathode Characteristics of Amorphous V <sub>2</sub> O <sub>5</sub> with Polymer Electrolyte and Li Anode at 100°C" by Shodai et al., J. Electrochem. Soc., Vol. 141, No. 10, October 1994, pp. 2611-2614.
CF	"Cathode Limited Charge Transport and Performance of Thin Film Rechargeable Lithium Batteries" by, Bates et al., Electrochem. Soc. Proceedings, Vol. 94-28, 1994, pp. 342-347.
CQ	"Comparison Of LiV <sub>2</sub> O <sub>6</sub> Cathode Materials Prepared by Different Methods" by, West et al., J. Electrochem. Soc., Vol. 143, No. 3, March 1996, pp. 820-825.


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DA	5,290,592	03-01-94	Izuchi et al.	427	203	

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
DB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

DC	"Comparison of $\text{LiV}_2\text{O}_5$ Cathode Materials Prepared By High Temperature And Gel Synthesis" by West et al., J. Electrochem. Soc., Vol. 143, No. 3, March 1996, pp. 820-825.
DD	"Composite Cathode Formulation Effects On The Discharge Characteristics of Lithium Rechargeable Cells Based on $\text{V}_2\text{O}_5$ " by, Saidi et al., Solid State Ionics 78, (1995) pp.169-173.
DE	"Effects of Aging and Drying on Structure of $\text{V}_2\text{O}_5$ Gels" by, Hirashima et al., Journal of Non-Crystalline Solids 186 (1995) pp. 54-58.
DF	"Electrochemical Insertion/Extraction of Lithium into/from Vanadium Pentoxide Xerogel in a Propylene Carbonate Solution" by, Miura et al., Dept. of Chemistry, Faculty of Science and Technology, Vol. 59, No. 2, 1991, pp. 157-161.
DG	"Electrochemical Lithium Intercalation into and Deintercalation From Vanadium Oxide Electrode By Using Potentiostatic Current Transient Technique" by, Bae et al., Solid State Ionics, Vol. 90, (1996), pp. 251-260.
DH	"Electrochemical Properties of Non-Stoichiometric $\text{V}_2\text{O}_5$ " by, West et al, Electrochimica Acta, No. 12, 1983, pp. 1829-1833.
DI	"Electronic and Vibrational Properties of Rb-Intercalated $\text{MoS}_2$ Nanoparticles" by Bandow et al., Materials Science and Engineering A204, (1995) pp. 222-226.
DJ	"Evaluation of a New Type of Vanadium Oxide From Peroxo-polyvanadate as a Cathode Material For Rechargeable Lithium Batteries" by Ugaji et al., J. Electrochem. Soc., Vol 142, No. 11, November 1995, pp. 3664-3668.
DK	"Improved Capacity Retention In Rechargeable 4 V Lithium/Lithium Manganese Oxide (Spinel) Cells" by Gunnow et al., Solid State Ionics 69 (1994) pp. 59-67.


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BA						

## FOREIGN PATENT DOCUMENTS

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EB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EC	"Improved Rechargeability of Vanadium Pentoxide Xerogel in a Lithium Cell by substituting Interlamellar Water with Aniline" by, Miura et al., Denki Kagaku, Communication, Vol. 59, No. 3 (1991) pp. 252-253.
ED	"Li/Li <sub>1-x</sub> V <sub>2</sub> O <sub>6</sub> Batteries V. Comparison with Other Secondary Cells and Influence of Micro- and Macro-Structural Alterations on the Cathode Performance" by, Pasquali et al., J. Electrochem. Sci. and Tech., December 1986, pp. 2434-2458.
EE	"Li/Li <sub>1-x</sub> V <sub>2</sub> O <sub>6</sub> Secondary Batteries Synthesis and Characterization of An Amorphous Form of the Cathode" by, Pistoia et al., J. Electrochem. Soc. Vol. 137, No. 8, August 1990, pp. 2365-2370.
EF	"Modeling A Porous Intercalation Electrode with Two Characteristic Particle Sizes" by, Darling et al., J. Electrochem. Soc. Vol. 144, No. 12, December 1986 December 1997, pp. 4201-4208.
EG	"Nanocomposite Manganese Oxides for Rechargeable Lithium Batteries" by, Kim et al., Electrochemical and Solid-State Letters, 1(5), 1998, pp. 207-209.
EH	"New Process for the Preparation of M <sup>2+</sup> -v <sub>2</sub> O <sub>5</sub> -H <sub>2</sub> O Xerogels and Their Transformation to -M <sup>2+</sup> -V <sub>2</sub> O <sub>5</sub> Bronzes (M = Ca, Mn, Co, Ni, Cu)" by, Watanabe et al., J. Mater. Chem, 5(5), 1995, pp. 753-756.
EI	"Performance of Lithium/ V <sub>2</sub> O <sub>5</sub> Xerogel Coin Cells" by, Tipton et al., J. Electrochem. Soc., Vol. 143, NO. 11, November 1996, pp. 3473-3477.
EJ	"Performance of Polymer Electrolyte Cells At +25 To +100°C" by, Munshi et al., Solid State Ionics 26 (1988) pp. 41-46.
EK	"Preparation and Lithium Intercalation of A New Vanadium Oxide With A Two-Dimensional Structure" by, Ribino et al., Solid State Ionics (1995), pp. 239-244.
EL	"Raman Spectroscopic Investigations of LI-Intercalated V <sub>2</sub> O <sub>5</sub> Xerogel" by, Cazzanelli et al., Journal of Non-Crystalline Solids 208 (1996) 89-98.

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FA						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
FB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

FC	"Rechargeable Lithium/Vanadium Oxide Cells Utilizing 2Me-THF/LiAsF <sub>6</sub> ," by, Abraham et al., Journal of Electrochemical Society, Vol. 128, No. 12, December 1981, pp. 2493-2501.
FD	"Relationship Between Chemical Bonding Nature and Electrochemical Property of LiMn <sub>2</sub> O <sub>4</sub> Spinel Oxides With Various Particle Sizes: "Electrochemical Grafting" Concept" by, Treuil et al., J. Phys. Chem. B, Vol. 103, March 1999, pp. 2100-2106.
FE	"Small Particle-Size Lithium Oxide: An Improved Cathodic Material For High Rate Rechargeable Lithium Batteries" by, Pestoia et al., Journ. of Power Sources, 27, 1989, pp. 35-43.
FF	"Spin Coated V <sub>2</sub> O <sub>5</sub> Xerogel Thin Films As Hosts For Lithium Insertion" by, Passerini et al., The Electrochemical Society Proceedings, 1994, Vol. 94-28, pp. 296-303.
FG	"Spin-Coated V <sub>2</sub> O <sub>5</sub> Xerogel Thin Films. 1. Microstructure and Morphology" by, Passerini et al., Chem. Mater. 7, 1995, pp. 780-785.
FH	"Structural Changes In Vanadium Oxide-Based Cathodes During Cycling In A Lithium Polymer Electrolyte Cell" by, Macklin et al., Electrochimica Acta, Vol. 37, No. 9, 1992, pp. 1715-1720.
FI	"Substitution of Interlayer Water In Vanadium Pentoxide Xerogel With Propylene Carbonate and Its Effects on the Cathode Behavior in a Lithium Cell" by, Miura et al., Vol. 59, No. 2 (1991) pp. 149-151.
FJ	"Synthesis and Characterization of Vanadium Oxide Aerogels" by, Chaput et al., Journal of Non-Crystalline Solids 188, Vol. (1995) pp. 11-18.
FK	"The Effect Of Doping Electrochromic Molybdenum Oxide With Other Metal Oxides: Correlation of Optical And Kinetic Properties" by, Monk et al., Solid State Ionics 80, (1993) pp. 75-83.

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GA						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
GB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

GC	"The Performance of Single-Phase $V_2O_5$ in The Lithium/Polymer Electrolyte Battery" by, Lampe-Dinnerud et al., J. Electrochem. Soc., Vol. 142, No. 11, November 1995, pp. 3648-3651.
GD	"The Switching Mechanism in $V_2O_5$ Gel Films" by, Zhang et al., J. Appl. Phys. 64 (2), July 15, 1988, pp. 729-733.
GE	"Thin-Film Rechargeable Lithium and Lithium-Ion Batteries" <a href="http://www.ssd.ornl.gov/batteryweb/">http://www.ssd.ornl.gov/batteryweb/</a> , September 1998.
GF	"Vanadium Oxide Cathode Materials For Secondary Lithium Cells" by, Murphy et al., Journal of Electrochem. Society, Vol. 126, No. 3, March 1979, pp. 497-499.
GG	"Vanadium Oxide Xerogels As Electrodes For Lithium Batteries" by, West et al., Electrochimica Acta, Vol. 38, No. 9, 1993, pp. 1215-1220.
GH	"Vanadium Oxides As Electrode Materials For Rechargeable Lithium Cells" by, West et al., Journal of Power Sources, Vol. 20, (1987), pp. 165-172.
GI	"XAS and Electrochemical Characterization Of Lithium Intercalated $V_2O_5$ Xerogels" by, Pessierini et al., Solid State Ionics Vol. 90, (1996) pp. 5-14.

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